

CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR PROPOSAL

	REQUISITION NUMBER	DUE DATE	TIME DUE
MDOT PROJECT MANAGER	JOB NUMBER (JN)	CONTROL SECTION (CS)	

DESCRIPTION

MDOT PROJECT MANAGER: Check all items to be included in. WHITE = REQUIRED ** = OPTIONAL			CONSULTANT: Provide only checked items below in proposal when applicable, Best Value scoring criteria is listed separately in the RFP. **Optional items are determined by the MDOT Project Manager.
Check the appropriate Tier in the box below			
TIER I (\$100,000 - \$250,000)	TIER II (\$250,000-\$1,500,000)	TIER III (>\$1,500,000)	
			Understanding of Service **
N/A			Innovations
			Organizational Chart
			Qualifications of Team
N/A	N/A		Quality Assurance/Quality Control **
			Location: The percentage of work performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity.
N/A	N/A		Presentation **
N/A	N/A		Technical Proposal (if Presentation is required)
3 pages (MDOT Forms not counted) Resumes will only be accepted for Best Value Selections.	7 pages (MDOT Forms not counted)	14 pages (MDOT Forms not counted)	Total maximum pages for RFP not including key personnel resumes . Resumes limited to 2 pages per key staff personnel.

PROPOSAL AND BID SHEET E-MAIL ADDRESS – mdot-rfp-response@michigan.gov

The Consultants will receive an e-mail reply/notification from MDOT when the proposal is received. Please retain a copy of this e-mail as proof that the proposal was received on time. Consultants are responsible for ensuring that MDOT receives the proposal on time.

* Contact Contract Services Division immediately at 517-373-4680 if you do not get an auto response.

GENERAL INFORMATION

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least five (5) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal.

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D – Request for Proposal Cover Sheet

5100J – Consultant Data and Signature Sheet (Required for all firms performing non-prequalified services on this project.)

(These forms are not included in the proposal maximum page count.)

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be developed and submitted in accordance with the latest [Consultant/ Vendor Selection Guidelines for Services Contracts](#)."

RFP SPECIFIC INFORMATION

ENGINEERING SERVICES	BUREAU OF TRANSPORTATION PLANNING	OTHER
THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS		
NO	YES	DATED _____ THROUGH _____
Prequalified Services – See the attached Scope of Services for required Prequalification Classifications.		Non-Prequalified Services – If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, is on file with MDOT's Office of Commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed. Form 5100J is required with proposal for all firms performing non-prequalified services on this project.

Qualification Based Selection - Use [Consultant/Vendor Selection Guidelines](#).

For all Qualifications Based Selections, the selection team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

Qualification Based Selection / Low Bid – Use [Consultant/Vendor Selection Guidelines](#). See Bid Sheet instructions for additional information.

For Qualification Review/Low Bid selections, the selection team will review the proposals submitted. The vendor that has met established qualification threshold and with the lowest bid will be selected.

Best Value – Use [Consultant/Vendor Selection Guidelines](#), See Bid Sheet Instructions below for additional information. The bid amount is a component of the total proposal score, not the determining factor of the selection.

Low Bid (no qualifications review required – no proposal required.)

BID SHEET INSTRUCTIONS

Bid Sheet(s) are located at the end of the Scope of Services. Submit bid sheet(s) with the proposal, to the e-mail address: MDOT-RFP-Response@michigan.gov. Failure to comply with this procedure may result in your bid being rejected from consideration. MDOT reserves the right to reject any and all bids.

PARTNERSHIP CHARTER AGREEMENT

MDOT and ACEC created a Partnership Charter Agreement which establishes guidelines to assist MDOT and Consultants in successful partnering. Both the Consultant and MDOT Project Manager are reminded to review the [ACEC-MDOT Partnership Charter Agreement](#) and are asked to follow all communications, issues resolution and other procedures and guidance's contained therein.

PROPOSAL REQUIREMENTS

Proposals must be submitted for this project electronically. Proposal submittal requirements are listed in *PART IV – INSTRUCTION FOR SUBMITTING PROPOSALS* at the following link [Selection Guidelines for Service Contracts](#)

FINANCIAL REQUIREMENTS FOR NON-PREQUALIFIED VENDORS

[Financial Requirements for Non-Prequalified Consultants/Vendors](#)

E-VERIFY REQUIREMENTS

E-Verify is an Internet based system that allows an employer, using information reported on an employee's Form I-9, Employment Eligibility Verification, to determine the eligibility of that employee to work in the United States. There is no charge to employers to use E-Verify. The E-Verify system is operated by the Department of Homeland Security (DHS) in partnership with the Social Security Administration. E-Verify is available in Spanish.

The State of Michigan is requiring, under Public Act 200 of 2012, Section 381, that as a condition of each contract or subcontract for construction, maintenance, or engineering services that the pre-qualified contractor or subcontractor agree to use the E-Verify system to verify that all persons hired during the contract term by the contractor or subcontractor are legally present and authorized to work in the United States.

Information on registration for and use of the E-Verify program can be obtained via the Internet at the DHS Web site: <http://www.dhs.gov/E-Verify>.

The documentation supporting the usage of the E-Verify system must be maintained by each consultant and be made available to MDOT upon request.

It is the responsibility of the prime consultant to include the E-Verify requirement documented in this NOTIFICATION in all tiers of subcontracts.

DIGITAL SIGNATURE OF CONTRACTS

On **January 4, 2018**, Contract Services Division implemented the use of CoSign as the exclusive software for digitally signing all consultant contracts and consultant contract related documents. All other digital signing methods are no longer accepted.

Prior to using CoSign, all external partners must apply for a free digital signature user account by submitting a [MDOT Digital Signature Certificate Request Form](#).

MDOT INSURANCE UPDATED 3.9.17

At a minimum, the insurance types and limits identified below, may be required from the selected consultant, prior to contract award.

Required Limits	Additional Requirements
Commercial General Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence Limit \$1,000,000 Personal & Advertising Injury Limit \$2,000,000 General Aggregate Limit \$2,000,000 Products/Completed Operations	Consultants must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds
Automobile Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Per Occurrence	
Workers' Compensation Insurance	
<u>Minimal Limits:</u> Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
Employers Liability Insurance	
<u>Minimal Limits:</u> \$500,000 Each Accident \$500,000 Each Employee by Disease \$500,000 Aggregate Disease	
Professional Liability (Errors and Omissions) Insurance	
<u>Minimal Limits:</u> \$1,000,000 Per Claim	

The Insurer shall provide at least thirty (30) days written notice of cancellation. The Prime Consultant will be responsible to verify subconsultant(s) compliance with MDOT's insurance requirements.

Michigan Department of Transportation

SCOPE OF SERVICE FOR SPECIALTY SERVICES Device Modernization Plan (DMP)

CONTROL SECTION: 84900

JOB NUMBER: 206721

PROJECT LOCATION:

Statewide with majority of work to be performed in coordination with the ITS Program Office located in Lansing, MI.

PROJECT DESCRIPTION:

Work involved in this contract will include the following aspects:

- 1) The development of a Device Modernization Plan (DMP). This work will include but is not limited to the evaluation of all ITS, environmental sensor stations (ESS) and connected and automated vehicle (CAV) devices that have reached a state of technical obsolescence and/or a high probability of failure over the next 5-10 years, along with a plan prioritizing the modernization of the resulting sites and the proposed methodology for implementation that considers all aspects of cost and delivery timeline (mobility, scale, logistics).
- 2) Maintenance of the DMP which will include an annual evaluation for state of the practice, device maintenance history, and device technological characteristics. The annual evaluation should also involve determining device value to the motoring public and recommending device removal.
- 3) Subsequent design work adhering to the DMP, associated with the development of construction letting documents which may range from log jobs to plan sheets to full contract packages.

At MDOT's option, the consultant may serve as the MDOT representative and system manager through the construction phase under a separate authorization.

ANTICIPATED SERVICE START DATE: June 1, 2019

ANTICIPATED SERVICE COMPLETION DATE: September 30, 2023

PRIMARY PREQUALIFICATION CLASSIFICATION(S):

Design – Traffic: ITS Design & System Manager

SECONDARY PREQUALIFICATION CLASSIFICATION(S):

Design- Traffic: Work Zone Maintenance of Traffic

Design- Traffic: Signal

Design- Geotechnical

Surveying – Road Design (precautionary)

PREFERRED QUALIFICATIONS AND CRITERIA (FOR NON-CLASSIFIED SERVICES):

The project manager shall be an engineer licensed in the State of Michigan with relevant experience in ITS systems engineering and design services. The project manager shall be an employee of the primary consulting firm responding to the RFP and not a sub- Consultant.

UTILITY COORDINATION

The Consultant shall be responsible for project Utility Coordination. See attached “Scope of Services for Utility Coordination”.

MDOT PROJECT MANAGER:

Brandan Maurer, P.E.

Intelligent Transportation Systems Specialist

Michigan Department of Transportation

8885 Ricks Rd.

P.O. Box 30049

Lansing, MI, 48917

517-449-0730

MaurerB@michigan.gov

The Consultant shall contact the Project Manager prior to beginning any work on the project.

CONSTRUCTION COST:

A.	The estimated cost of construction in FY 2019 is:	\$2,000,000
B.	The estimated cost of construction in FY 2020 is:	\$4,000,000
C.	The estimated cost of construction in FY 2021 is:	\$4,000,000
D.	The estimated cost of construction in FY 2022 is:	\$4,000,000
E.	The estimated cost of construction in FY 2023 is:	\$4,000,000
F.	The estimated cost of real estate is:	\$0
G.	Total Contract Cost:	\$18,000,000

REQUIRED MDOT GUIDELINES AND STANDARDS:

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road Design Manual, Standard Plans, Published MDOT Design Advisories, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, etc.).

The Consultant is required to use the MDOT Current Version of Bentley Microstation/GEOPAK or PowerGEOPAK (published at [Section 2.2.2](#) of the [Design Submittal Requirements](#)) with the current MDOT workspace (published at [Section 2.2.1](#) of the [Design Submittal Requirements](#)). 3D Models are required for all applicable projects. See [Chapter 2](#) of the [Design Submittal Requirements](#) for a complete listing of applicable projects. The consultant shall comply with all MDOT CADD standards and file naming conventions.

MISCELLANEOUS INFORMATION:

The Consultant shall furnish all services and labor necessary to conduct and complete the services described herein. The Consultant shall also furnish all materials, equipment, supplies, and incidentals necessary to perform the Services (other than those designated in writing to be furnished by the Department) and check and/or test the materials, equipment, supplies and incidentals as necessary in carrying out this work. The services shall be performed to the satisfaction of the Department consistent with applicable professional standards.

The Consultant shall comply with all applicable Federal and State laws, rules, and regulations. The Consultant staff shall conduct themselves with professionalism in carrying out their duties.

The Consultant shall notify the Project Manager, in writing, prior to any personnel changes from those specified in the Consultant's original approved proposal. Any personnel substitutions are subject to review and approval of the Project Manager.

At the request of the Department, the Consultant, during the progress of the Services, shall furnish information or data relating to the Services described herein that may be required by the Department to enable it to carry out or to proceed with related phases of the Project not described herein, or which may be necessary to enable the Department to furnish information to the Consultant upon which to proceed with further Services.

BACKGROUND INFORMATION:

In 2018, the MDOT ITS Program completed the process of updating its strategic plan. This plan acts as a compass in supporting decisions and setting priorities moving forward in the changing ITS landscape. Within the strategic plan, one of the primary goals is to maintain a sustainable program. To achieve this goal, the development and implementation of a DMP to address aging ITS infrastructure, field devices and software needs is crucial.

The Department's existing ITS infrastructure includes, but is not limited to the following devices: magnetometer/point detection, microwave vehicle detection systems (MVDS), video and radar vehicle detectors, dynamic message signs (DMS), closed-circuit television (CCTV) cameras, travel time signs (TTS), lane control systems (LCS), speed warning systems, ESS, communications system (licensed and unlicensed wireless radios, fiber optic cable, cellular modems, managed field Ethernet switches (MFES), etc.), Truck Parking Information and Management System (TPIMS), Border Wait Time devices, dedicated short-range communications (DSRC) roadside units (RSU), and related CAV technologies all of which will need to be taken into consideration.

CONSULTANT RESPONSIBILITIES:

1. Development of the DMP

The Contractor will utilize multiple sources of information including the MDOT ITS Asset Management Database (AMD), device and historical maintenance records, literature review, independent state of practice research, and site visits to develop a plan for the modernization of statewide ITS, ESS and CAV infrastructure that will need to be addressed in the next five to ten years. The DMP will consist of a selection of device and corridor candidates that will be based not only on these temporal factors but also the potential for early obsolescence or technological upgrades.

Results of the DMP will include but are not limited to:

- A. Device modernization prioritization including an evaluation of site value to the department
- B. Cost analysis of device modernization including but not limited to, retrofit, repair, or removal
- C. Recommended technological enhancements
- D. Recommended methodology to focus on per project device prioritization and mobilization cost

2. Maintenance of the DMP

The DMP will need to be managed on a reoccurring basis to factor in changes in practice and new device information including work order history and new obsolescence findings. At a minimum this will need to be managed annually to coincide with the subsequent year's construction schedule.

3. Design work associated

The Consultant will be responsible for design work resulting from the DMP through the duration of this contract. This will include the development of any associated as-needed construction letting documentation as identified through the DMP process. This may range from log jobs to plan sheets with full contract packages.

Design work associated with this project includes, but is not limited to the following:

The Consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job and perform field operations in accordance with the Department's Personal Protective Equipment (PPE) policy as stated in the MDOT Guidance Document #10118.

Meet with the MDOT Project Manager to review project, location of data sources and contact persons, and review relevant MDOT operations. The Consultant shall review and clarify project issues, data needs and availability, and the sequence of events and team meetings that are essential to complete the design by the project plan completion date. Attention shall be given to critical target dates that may require a large lead time.

- A. Prepare required plans, typical cross-sections, details, and specifications required for design and construction.
- B. Compute and verify all plan quantities.
- C. Perform design surveys and ITS bucket truck surveys as-needed.
- D. Perform soil borings and geotechnical analysis.
- E. Perform required design and technical specification writing necessary to develop a final bid package based on 100% complete plans and to provide a cost estimate for construction.
- F. Prepare required plans, details and specifications required for design and construction.
- G. Prepare staging plans and special provisions for maintaining traffic during construction.
- H. Provide solutions to any unique problems that may arise during the design of this project.
- I. The Consultant may be required to provide Design Services during the construction phase of this project.
- J. Maintain a Design Project Record in ProjectWise, which includes a history of significant events (changes, comments, etc.) which influenced the development of the plans, dates of submittals and receipt of information.
- K. If excavation is required, submit the excavation locations which may contain contamination. Project Manager then can proceed in requesting a Project Area Contamination Survey (PACS).
- L. The Consultant shall prepare and submit in ProjectWise (in PDF format) a CPM network for the construction of this project.

- M. The Consultant representative shall record the minutes and submit in ProjectWise (in PDF format), for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees. MDOT will provide and distribute official meeting minutes for The Plan Review Meeting.
- N. The Consultant will provide to MDOT, by entering into MDOT ProjectWise at the scheduled submittal dates, electronic documents (in PDF format) of the required specifications and plan set materials for distribution by MDOT for all reviews for this project.
- O. Prepare and submit electronically (native format or PDF) into MDOT ProjectWise, any information, calculations, hydraulic studies, or drawings required by MDOT for acquiring any permit (ie. NPDES, DEQ, etc), approvals (i.e. county drain commission) and related mitigation. MDOT will submit permit requests.
- P. Attend any project-related meetings as directed by the MDOT Project Manager.
- Q. Attend information meetings (i.e., public hearings, open houses, etc.) with the public and public officials to assist in responding to concerns and questions. May require the preparation of displays such as maps, marked-up plans, etc.
- R. The MDOT Project Manager shall be the official MDOT contact person for the Consultant **and shall be made aware of all communications regarding this project**. The Consultant must either address or send a copy of all correspondence to the MDOT Project Manager. This includes all Subcontractor correspondence and verbal contact records.
- S. The Consultant shall contact the MDOT Project Manager whenever discoveries or design alternatives have the potential to require changes in the scope, limits, quantities, costs, or right-of-way of the project.
- T. The Consultant shall be responsible for all traffic control required to perform the tasks as outlined in this Scope.
- U. The Consultant shall be responsible for obtaining up to date access permits and pertinent information for tasks in MDOT Right of Way (ROW). This information can be obtained through Utilities/Permits Section, Development Services Division.
- V. On the first of each month, the Consultant Project Manager shall submit in ProjectWise a monthly project progress report to the Project Manager.

DELIVERABLES:

At the request of MDOT, the Consultant, during the progress of the services, shall furnish information or data relating to the services described herein that may be required by MDOT to carry out or proceed with related phases of the project not described herein, or which may be necessary to enable MDOT to furnish information to the Consultant upon which to proceed with further services.

The Consultant shall deliver all computer files associated with the project in their native format (spreadsheets, CADD files, etc.) on DVD, CD or uploaded to ProjectWise, as directed by the MDOT Project Manager. All CADD files shall be created and identified with standard MDOT file names as shown in Appendix A of the Road Design Manual. It is the Consultant's responsibility to obtain up to date MicroStation seed/configuration files necessary to comply with MDOT's CADD standards which are posted to the bulletin board system. Any CADD files that do not conform to MDOT standards will be returned to the Consultant for correction at the Consultant's expense.

The DMP shall be submitted in its native word document format as well as PDF.

Proposal documents shall be submitted in their native format with standard naming conventions as well as combined into one PDF file in the sequence specified by MDOT. To provide text search capabilities the combined proposal shall be created by converting native electronic files to PDF. Scanning to PDF is discouraged except in instances where it is necessary to capture a legally signed document, or a hard copy version of a document is all that exists.

At final Plan Turn-In, Reference Information Documents (RID) shall be delivered to MDOT with standard naming conventions and content. The RID files included will depend on the design survey and work type of the project. These files range from CADD, existing terrain, proposed cross sections, 3D models and files generated for Automated Machine Guidance (AMG) and automated inspection/stakeout activities.

Plan files shall be submitted in their native dgn format with standard naming conventions as well as plotted into a combined Adobe PDF file. Plan sheets shall be plotted to Adobe PDF with full text search and level on/off capabilities in half size (11" x 17") formats.

All plans, special provisions, estimates, and other project related items shall meet all MDOT requirements and detailing practices (i.e., format, materials, symbols, patterns, and layout) or as otherwise directed by the MDOT Project Manager. All plans, specifications, and other project related items are subject to review and approval by MDOT.

Stand Alone Proposal Estimator's Worksheet (SAPW) shall be used to generate the txt and xml files necessary for import into the Trns*port bid letting software. The SAPW files shall be entered into MDOT ProjectWise in the appropriate folder.

The project removal, construction, and profile sheets will require a scale of **1"=80'** or as approved by the **Project Manager**. See Section 1.02.12 of the Road Design Manual for further direction.

UTILITIES:

The Consultant shall be responsible for obtaining from MDOT and showing on the plans the location and names of all existing utilities within the limits of the project. In the course of resolving utility conflicts, the Consultant shall make modifications to the plans or design details and provide assistance as directed by the MDOT Utility Permits Engineer and/or Project Manager. The Consultant shall attend any utility meetings called to ensure that the concerns are addressed on the plans involving utilities. The Consultant shall assist in the review of utility permit requests to ensure compatibility with the project. The Consultant shall provide for the staking of various proposed facilities to locate potential utility conflicts and aid in the completion of utility relocation plans for and private utility companies.

QUALITY ASSURANCE/QUALITY CONTROL PLAN:

The project will require a Quality Assurance/Quality Control (QA/QC) plan that will cover the work defined herein and will be revised as required to cover assigned tasks. The QA/QC activities also include preparation of the monthly status reports, invoices, and attendance at project meetings when requested by the MDOT Project Manager. The Consultant shall record and submit typed minutes for all meetings to the MDOT Project Manager within one week of the meeting in electronic format. The Consultant shall also distribute the minutes to all meeting attendees. On the first of each month, the Consultant shall submit a monthly status report to the MDOT Project Manager. In addition to monthly status reports, all payment invoices must include a detailed status report.

MDOT RESPONSIBILITIES:

MDOT shall provide the Consultant with all relevant documentation needed to complete the tasks assigned and approved by the MDOT Project Manager.

- A. Schedule and/or conduct the following if deemed necessary:
 - 1. Project related meetings
 - 2. The Plan Review meeting
 - 3. Omissions/Errors/Check meeting
 - 4. Utility meetings
 - 5. Final Transport item cost estimates
- B. Make decisions or provide input for the following items:
 - 1. Political issues
 - 2. Issues related to funding
 - 3. Final packaging of the Proposal after the Consultant's review of the final package
 - 4. Final letting date
- C. Furnish pertinent reference materials
- D. Furnish prints of an example of a similar project and old plans of the area, if available
- E. Obtain all permits for the project, if necessary

- F. Obtain Project Area Contamination Survey (PACS)
- G. Provide Progress Clause for the project
- H. Provide environmental clearance
- I. Review and approve all external communications

CONSULTANT PAYMENT – Actual Cost-Plus Fixed Fee

Compensation for this project shall be on an **actual cost plus fixed fee** basis. This basis of payment typically includes an estimate of labor hours by classification or employee, hourly labor rates, applied overhead, other direct costs, subconsultant costs, and applied fixed fee. The fixed fee for profit allowed for this project is 11.0% of the cost of direct labor and overhead.

All billings for services must be directed to the Department and follow the current guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's website. This document contains instructions and forms that must be followed and used for billing. Payment may be delayed or decreased if the instructions are not followed.

Payment to the Consultant for services rendered shall not exceed the maximum amount unless an increase is approved in accordance with the contract with the Consultant. Typically, billings must be submitted within 60 days after the completion of services for the current billing. The final billing must be received within 60 days of the completion of services. Refer to your contract for your specific contract terms.

Direct expenses, if applicable, will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted with the billing for all eligible expenses on the project in accordance with the Reimbursement Guidelines. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the activities of this project.

MDOT will reimburse the consultant for vehicle expenses and the costs of travel to and from project sites in accordance with MDOT's Travel and Vehicle Expense Reimbursement Guidelines, dated May 1, 2013. The guidelines can be found at http://www.michigan.gov/documents/mdot/Final_Travel_Guidelines_05-01-13_420289_7.pdf?20130509082418. MDOT's travel and vehicle expense reimbursement policies are intended primarily for construction engineering work. Reimbursement for travel to and from project sites and for vehicle expenses for all other types of work will be approved on a case by case basis. MDOT will pay overtime in accordance with MDOT's Overtime Reimbursement Guidelines, dated May 1, 2013. The guidelines can be found at http://www.michigan.gov/documents/mdot/Final_Overtime_Guidelines_05-01-13_420286_7.pdf?20130509081848. MDOT's overtime reimbursement policies are intended primarily for construction engineering work. Overtime reimbursement for all other types of work will be approved on a case by case basis.

Refer to your contract for your specific contract terms.

ATTACHMENT A
SCOPE OF SERVICE
FOR
DESIGN SURVEYS
Version: June 2016

TYPE OF SURVEY:

X	Surveying: Road Design (3330)
	Surveying: Structure (3340)
	Surveying: Hydraulics (3350)
	Surveying: Right of Way (4510)

(Work in any of the above Survey Services Categories must be completed by a survey firm which is pre-qualified by MDOT for that category.)

GENERAL REQUIREMENTS:

1. Surveys must comply with **all Michigan law** relative to land surveying.
2. Surveys must be done under the **direct supervision** of a Professional Surveyor licensed to practice in the State of Michigan.
3. The selected Survey Consultant must discuss the scope of this survey with an MDOT Survey Consultant Project Manager or an MDOT Region Surveyor before submitting a priced proposal.
4. The selected Survey Consultant must contact the Region or TSC Traffic and Safety Engineer for work restrictions and traffic control requirements. Costs for traffic control must be included in the priced proposal in order to be reimbursed as a direct cost.
5. A **detailed Survey Work Plan must** be included with the Priced Proposal. A **spreadsheet estimate** of hours by specific survey task such as horizontal control, leveling, mapping, alignment determination, etc., **must** be included in the **Priced Proposal**.
6. It is the responsibility of the Survey Consultant to safeguard all corners of the United States Public Land Survey System, published Geodetic Control and any other Property Controlling corners that may be in danger of being destroyed by the proposed construction project.
7. Surveys must meet all requirements of the *MDOT Design Surveys Standards of Practice* (link: http://mdotwiki.state.mi.us/design/index.php/Chapter_1_-_Survey_Manual_Introduction). Please contact the MDOT Design Survey Support Unit to clarify any specific questions regarding these standards.

8. Survey Consultants must obtain all necessary permits required to perform this survey on any public and/or private property, including an up-to-date permit from the MDOT Utilities Coordination and Permits Section.
9. Prior to performing the survey, the Survey Consultant must contact all landowners upon whose lands they will enter in accordance with the *MDOT Design Surveys Standards of Practice*. A template letter can be found here:
http://mdotwiki.state.mi.us/design/index.php/File:EXAMPLE_Right_of_Entry.pdf
10. The Survey Consultant must contact any and all Railroads prior to commencing field survey on railroad property. The cost for any permit, flaggers and/or training that is required by the Railroad will be considered as a direct cost, but only if included in the Survey Consultant's priced proposal.
11. The Survey Consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job.
12. The MDOT Project Manager is the official contact for the Survey Consultant. The Survey Consultant must send a copy of all project correspondence to the MDOT Project Manager. The MDOT Project Manager shall be made aware of all communications regarding this project. Any survey related questions regarding this project should be directed to an MDOT Survey Consultant Project Manager or MDOT Region Surveyor. **The MDOT Project Manager must be copied on any and all correspondence.**

SURVEY PROJECT LIMITS:

If specific survey limits are not included, then the Survey Consultant must develop the survey limits based on the needs of the design team. A description of survey limits detailing length, width and cross roads must be included in the Survey Work Plan.

RESEARCH:

Survey Consultants are responsible for a comprehensive and conscientious research of all records, including MDOT records, essential for the completion of this project. The MDOT Design Survey Support Unit is available to assist in researching MDOT records.

CONTROL:

If not specified in this scope, Primary and Intermediate Horizontal Control Points and Benchmarks established for this project must meet the requirements specified in Chapter 3 of the *MDOT Design Surveys Standards of Practice*.

The Horizontal and Vertical datums and coordinate system must be clearly stated in the Survey Work Plan and subsequent submittals. For acceptable datums and coordinate systems refer to Chapter 3 of the *MDOT Design Surveys Standards of Practice*.

ALIGNMENT & ROW:

If not defined in this scope, the use of either a Legal or Non-legal Alignment and ROW must be determined from the needs of the design team. If it is determined that MDOT will need to acquire additional ROW with partial takes, then the **Legal** Alignment and ROW must be determined. If it is determined that there will be partial takes, the Survey Consultant may need to prepare a Certified Survey, refer to *Chapter 4 Section 6: Certified Surveys for Real Estate Acquisition* for requirements.

MAPPING:

Mapping shall include the objects and features as needed to meet the requirements of the proposed design. The Survey Consultant's Work plan shall clearly identify mapping items that will be included in the project.

The following should be considered when determining the mapping needs for the project:

- Roadway improvements, curbs, sidewalks, signs, guardrail, light poles
- Intersection signalization equipment
- Building structures and improvements on property adjacent to project
- Drainage appurtenances including ditches, culverts, structures
- Surface manifestations of utilities and connectivity
- Terrain surface mapping
- Trees and brush classification
- Bridge structure elements, measurements, elevations, and underclearance dimensions
- Hydraulics Survey of watercourses
- Use of Static Terrestrial Laser Scanning (STLS)
- Use of Mobile Terrestrial LiDAR Survey (MTL)
- Use of Photogrammetric Mapping

TRAFFIC & SAFETY:

The Selected Survey Consultant, and the Selected Survey Consultant only, is advised to discuss Traffic Control scenarios with the local MDOT TSC Traffic and Safety Engineer prior to submitting a priced proposal. Traffic Control costs not included in the priced proposal will not be paid by MDOT.

The Survey Consultant must submit an advanced notice 5-21 days prior to beginning any work activity through the MDOT Construction Permit System (CPS) (http://www.michigan.gov/mdot/0,4616,7-151-9625_72410---,00.html).

The Survey Consultant must adhere to all work restrictions and traffic control requirements detailed in the MDOT Advanced Notice Permit.

The Survey Consultant must have a vehicle with markings/logo that identifies the company within sight distance of survey activity and must have a 360-degree flashing strobe light on the top of the vehicle whenever they are working on or near the road.

Traffic control on city streets and county roads is under the jurisdiction of the local authorities where the project is located.

COORDINATION WITH OTHER CONTRACTS IN THE VICINITY:

The Survey Consultant shall coordinate operations with contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA).

MDOT maintenance crews and/or Contract Maintenance Agencies may perform maintenance work within or adjacent to the CIA. The Maintenance Division of MDOT and/or Contract Maintenance Agency will coordinate their operations with the MDOT Project Manager or Designate to minimize the interference to the Survey Consultant.

The Survey Consultant must contact the Operations Engineer at the local MDOT TSC for information regarding project coordination.

Other contracts or maintenance operations may occur during the life of the project. Contractors and other consultants involved with construction projects have similar requirements of cooperation and coordination of work as part of their projects as referenced in Article 104.08 of the *2012 Standard Specifications for Construction* (<http://mdotcf.state.mi.us/public/specbook/2012/>). Survey Consultants shall conduct their work with similar coordination efforts. The Survey Consultant will not be allowed claims for extra compensation or extensions of deadlines due to delays or failures of others to complete scheduled work.

POST SURVEY CLEAN-UP:

Once the survey is complete, all stakes must be removed from the MDOT median and ROW to aid the maintenance crews and adjacent property owners. All benchmarks and control points and their witnesses must remain in place.

DELIVERABLES:

The **MDOT Survey QA/QC Checklist** details the files that are to be submitted to MDOT (link: http://mdotwiki.state.mi.us/design/index.php/File:MDOT_Survey_Project_Checklist_2016.xlsm). This document shall be signed and certified by the Professional Surveyor responsible for the project QA/QC. **Failure to use and include this document may result in the immediate return of the project portfolio for completion.**

Files submitted to MDOT may vary by project type and scope, the following files **must always** be submitted to MDOT unless explicitly omitted in writing by the following MDOT personnel: MDOT Region Surveyor, MDOT Survey Consultant Manager or MDOT Supervising Land Surveyor:

- Survey Portfolio PDF (XXXXXXX_Survey_20YY-MM-DD.pdf)
- Survey Information Sheet (S-XXXXXXX_Survey_Info_Sheet_20YY-MM-DD.doc)
- Alignment and ROW CAD file (S-XXXXXXX_Align_ROW_20YY-MM-DD.dgn)

- 3D project map (S-XXXXXX_Survey_3D_20YY-MM-DD.dgn)
- When Mobile Terrestrial LiDAR (MTL) or Static Terrestrial Laser Scanning (STLS) techniques are used, three (3) copies of the entire point cloud must be delivered to the MDOT Survey Support Unit on media with appropriate storage capacity to contain all the data on one device.
- When Photogrammetric Mapping techniques are used, three (3) copies of the raw digital imagery, ortho-imagery and photogrammetrically extracted points cloud data must be delivered to the MDOT Survey Support Unit on media with appropriate storage capacity to contain all the data on one device.

All submitted files must be scanned and/or converted to one PDF format file. A Table of Contents in PDF format is required that has all PDF files bookmarked/linked so each place in the PDF archive can be accessed with a single click. Items required to be included in the Survey Portfolio PDF can be found in the QA/QC Checklist. Specified format files such as Microsoft Word and MicroStation GEOPAK must have separate access in native format outside of the PDF file.

At the completion of this survey for this project, legible copies of all field survey notes, all electronic data, and all research records obtained for this project will be considered the property of MDOT. Please include MDOT's Form 222(5/01) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL" for all transmittals. A copy of this transmittal form must be sent to the MDOT Project Manager for Design and the MDOT Supervising Land Surveyor.

Electronic submittal only. Survey deliverables must be submitted using ProjectWise. For file naming conventions and upload locations, refer to Chapter 10 of the *MDOT Design Surveys Standards of Practice*.

Acceptance of this survey by the MDOT Project Manager and/or the MDOT Supervising Land Surveyor does not relieve the Survey Consultant of any liability for the content of the survey.

ATTACHMENT B

**SCOPE OF SERVICE
FOR
UTILITY COORDINATION**

The Consultant is directly responsible for all aspects of the project's utility coordination. The Consultant is expected to provide technical assistance to MDOT, utilities and other stakeholders regarding utility identification, project utility coordination and utility conflict resolution.

A utility is defined as any privately, publicly, municipal or cooperatively owned line, facility, or system for producing, transmitting, or distributing communication, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, or any other similar commodity, including any fire or police signal system or street lighting system.

MDOT shall -

- Provide a preliminary list of utilities, with contact information, that may have facilities located within the project limits. This list may not be 100% accurate and/or complete.
- Provide assistance, if necessary, in contacting utilities to obtain facility records.
- Provide Consultant with utility responses and facility records if utility information solicitation has been performed.
- Organize and host a kick-off meeting with Consultant and MDOT prior to Consultant beginning utility coordination services.

Consultant shall -

- Maintain a Utility Conflict Matrix* spreadsheet and deliver as the bi-weekly status report.
- Distribute form letters, plans, etc. as outlined in 14.16 (Request for Utility Information) and 14.26 (Distribution of Preliminary Plans to Utilities and Utility Coordination Meeting) of the MDOT Road Design Manual.
 - Identify existing/proposed utility owners and facilities.
 - Collect and compile utility responses.
 - Follow up with non-responsive utilities.
- Schedule and conduct utility meetings for the resolution of conflicts between utility facilities and proposed construction.
 - Identify conflicts, discuss possible design modifications, develop utility relocation schemes, discuss reimbursable relocations, and discuss project scope and schedule.
 - Identify the utility's design and construction contacts and ensure the plan's note sheet utility contact information is accurate.
 - Record meeting minutes and distribute to all attendees.
- Schedule and conduct field meetings with individual utilities to resolve conflicts.
- Schedule and conduct meetings convened for the purpose of utility betterments.

- Ensure municipal utility relocations, betterments and reimbursements follow Chapter 9 of the MDOT Road Design Manual.
- Identify eligible reimbursable utility relocations, for public/private utilities, as outlined in 23 Code of Federal Regulations (CFR) Part 645 Subparts A and B – Utilities and ensure 23 CFR Part 635.410 - Buy America Requirements are met.
 - Collect documentation to evaluate reimbursable utility relocations.
- Evaluate utility relocation plans for compatibility with the proposed project.
- Ensure utility relocation schedules do not impact the project schedule.
- Confirm utility relocation permit applications are submitted to the TSC.
- Prepare the “Utilities Status Report” (MDOT Form 2286) and “Notice to Bidders - Utility Coordination” documents.
- Track and monitor utility relocation progress.

Deliverables (Provided to the TSC Utility Coordinator and Project Manager):

- Courtesy copies of all correspondence with the utilities
- Utility Conflict Matrix
- Utility coordination meeting minutes
- Reimbursable utility relocation documentation
- Utilities Status Report and Notice to Bidders - Utility Coordination

* The Utility Conflict Matrix (UCM) is located on the <http://www.trb.org/Main/Blurbs/166731.aspx> website under Training materials > Prototype 1 – Stand-alone UCM. The UCM was developed as part of the Transportation Research Board’s (TRB) second Strategic Highway Research Program (SHRP 2) Report S2-R15B-RW-1: Identification of Utility Conflicts and Solutions which provides concepts and procedures to identify and resolve utility conflicts. Tools described in the report include utility conflict matrices that enable users to organize, track, and manage conflicts that frequently arise.